

EVOLUTION – ORGANIC EVOLUTION - I

1. Darwin's finches are found in:
 - (a) Tahiti
 - (b) Tundra
 - (c) Galapagos Island
 - (d) None of these
2. Darwin's finches are an excellent example of:
 - (a) connecting links
 - (b) brood parasitism
 - (c) adaptive radiation
 - (d) seasonal migration
3. Tasmanian wolf is a marsupial while wolf is a placental mammal. This shows:
 - (a) genetic drift
 - (b) parallel evolution
 - (c) divergent evolution
 - (d) inheritance of acquired characters
4. Two organs which are similar in structure and origin, but not necessarily in function are called:
 - (a) apocrine
 - (b) analogous
 - (c) homologous
 - (d) none of these
5. Homology does not refer to:
 - (a) divergent evolution
 - (b) common descent
 - (c) convergent evolution
 - (d) adaptive radiation
6. The homologous organs are:
 - (a) wings of pigeon and bat
 - (b) wings of butterfly and bat
 - (c) wings of sparrow and honeybee
 - (d) wings of parrot and hands of man
7. Which of the following are not homologous?
 - (a) Insect mouthparts
 - (b) Insect legs
 - (c) Vertebrate forelimbs
 - (d) Bird and Insect wings
8. Which is incorrect?
 - (a) Wings of insects and Bats are analogous
 - (b) Wings of bats and Birds are homologous
 - (c) Wings of insects and Birds are analogous
 - (d) Wings of insects and Birds are homologous
9. Which of the following is a set of homologous organs?
 - (a) Wings of grasshopper, Flippers of whale
 - (b) Wings of birds, Front feet of horse
 - (c) Wings of housefly, Wings of birds
 - (d) None of the above
10. A thorn of *Bougainvillea* and a tendril of *Cucurbita* indicate:
 - (a) vestigial structures
 - (b) analogous structures
 - (c) homologous structures
 - (d) rudimentary structures

11. Homologous organs exhibit:
 - (a) evolution
 - (b) divergent evolution
 - (c) origin of mammals
 - (d) convergent evolution
 12. Hand of man, wing of bat and flipper of seal represent:
 - (a) vestigial organs
 - (b) analogous organs
 - (c) evolutionary organs
 - (d) homologous organs
 13. Animals that possess homologous organs probably:
 - (a) are not related
 - (b) are headed for extinction
 - (c) have increased genetic diversity
 - (d) evolved from a common ancestor
 14. The fact that the flipper of a whale and the arm of a human both have five digits and the same kind of bones illustrates that:
 - (a) humans evolved from whales
 - (b) whales evolved from humans
 - (c) genetic drift can cause the evolution of populations
 - (d) organisms can share characteristics simply because they share a common ancestor
 15. An evolutionary process, giving rise to new species adapting to new habitats and ways of life is called:
 - (a) adaptation
 - (b) microevolution
 - (c) adaptive radiation
 - (d) convergent evolution
 16. Analogous organs are:
 - (a) different in origin but similar in functions
 - (b) common in origin but different in functions
 - (c) different in origin and different in functions
 - (d) common in origin and common in functions
 17. Which of the following are analogous organs?
 - (a) Wings of bird and Bat
 - (b) Wings of insect and Bird
 - (c) Forelegs of horse and Arms of man
 - (d) Flippers of whale and Forelimbs of man
 18. Which one is correct?
 - (a) Wings of birds and Insects are homologous
 - (b) Caecum and Appendix in rabbit and Man are analogous
 - (c) Paired fins of fish and Flippers of whale are analogous
 - (d) *Archaeopteryx lithographica* is missing link between birds and mammals
 19. Which of the following are not analogous organs?
 - (a) Eye of *Octopus* and Eye of mammals
 - (b) Wings of birds and Wings of butterfly
 - (c) Flippers of penguin and Flippers of dolphin
 - (d) Thorns of *Bougainvillea* and Tendril of *Cucurbita*
 - (e) Tuberous root of sweet potato and Stem tuber of potato
 20. Eyes of an *Octopus* and mammals appear quite similar, but these are different in their basic structure and origin, hence they are:
 - (a) ancestral organs
 - (b) analogous organs
 - (c) homologous organs
 - (d) both homologous and analogous organs
-

21. Adaptation is a type of:
- (a) speciation
 - (b) adaptive radiation
 - (c) convergent evolution
 - (d) divergent evolution
22. Resemblance between widely different groups due to a common adaptation is known as:
- (a) parallel evolution
 - (b) divergent evolution
 - (c) convergent evolution
 - (d) retrogressive evolution
23. Which type of evolution is shown by wings of bat, mosquito and pigeon?
- (a) Divergent
 - (b) Atavism
 - (c) Convergent
 - (d) Vestigial organs
24. Convergent evolution of two species is associated with:
- (a) different habitat
 - (b) analogous organs
 - (c) homologous organs
 - (d) recent common ancestor
25. Sweet potato and potato are examples of:
- (a) homologous structures
 - (b) analogous structures
 - (c) both (a) and (b)
 - (d) none of these
26. Which of the following are not analogous organs?
- (a) Fins of fishes and Flippers of whales
 - (b) Stings of honeybee and Scorpion
 - (c) Thorn of *Bougainvillea* and Tendril of *Cucurbita*
 - (d) Wings of insect and Wings of pterodactyl
27. What are vestigial organs?
- (a) Organs of many uses
 - (b) Organs of no use to the possessor
 - (c) Organs present in the ancestors but absent now
 - (d) Present in the recent origins but absent in ancestors
28. Vestigial organs present in an adult individual are examples of basis of evidences of evolution:
- (a) anatomical
 - (b) embryological
 - (c) morphological
 - (d) palaeontological
29. Vestigial organs are all:
- (a) analogous
 - (b) homologous
 - (c) rudimentary
 - (d) physiologically important organs
30. Which of the following is a vestigial structure in man?
- (a) Intestine
 - (b) Stomach
 - (c) Wisdom teeth
 - (d) Muscle of glottis

31. Which set includes all vestigial structures of man?
(a) Ear muscle, Atlas, Body hair
(b) Coccyx, Wisdom teeth, Patella
(c) Coccyx, Wisdom teeth, Ear pinna muscle
(d) Vermiform appendix, Body hairs, Cochlea
32. An example of vestigial organ is:
(a) ear of cow
(b) hair of bear
(c) nail of monkey
(d) nictitating membrane of man
33. Which of the following are examples of vestigial structures?
(a) Your kneecap
(b) Your tail bone
(c) Your ear pinna
(d) Sixth finger found in some humans
34. Vestigial organ of python is:
(a) nose
(b) teeth
(c) scales
(d) girdles
35. Which is a set of evidences of evolution?
(a) Homologous and Analogous organs
(b) Homologous and Vestigial organs
(c) Analogous and Vestigial organs
(d) All of the above
36. Which protozoan resembles the ancestral form from which the plants and animals evolved?
(a) *Euglena*
(b) *Amoeba*
(c) *Plasmodium*
(d) *Paramecium*
37. A connecting link between Protozoa and Porifera is:
(a) *Euglena*
(b) *Protopterus*
(c) *Proterospongia*
(d) *Chlamydomonas*
38. Which of the following is a connecting link between two phyla?
(a) *Echidna*
(b) *Peripatus*
(c) *Chameleon*
(d) *Archaeopteryx*
39. *Peripatus* is a connecting link between:
(a) Coelenterata and Porifera
(b) Annelida and Arthropoda
(c) Mollusca and Echinodermata
(d) Ctenophora and Platyhelminthes
40. Connecting link between Annelids and Molluscs is:
(a) *Limulus*
(b) *Peripatus*
(c) *Neopilina*
(d) *Periplaneta*

41. Missing link in evolution is:
(a) *Limulus*
(b) *Peripatus*
(c) *Pheretima*
(d) *Archaeopteryx*
42. *Archaeopteryx* is a connecting link between:
(a) reptiles and birds
(b) fish and amphibians
(c) birds and mammals
(d) amphibians and birds
43. Prototherians are connecting link between:
(a) amphibian and ayes
(b) reptiles and mammals
(c) fishes and amphibians
(d) reptiles and amphibians
44. Atavism in man means:
(a) appearance of new characters
(b) evolution of existing characters
(c) appearance of ancestral characters
(d) loss of some pre existing characters
45. Which of the following is not an atavistic character?
(a) Dense body hairs
(b) Enlarged canines
(c) Presence of six fingers
(d) Presence of tail in some babies
46. A baby has been born with a small tail. It is case exhibiting
(a) atavism
(b) Mutation
(c) metamorphosis
(d) retrogressive evolution
47. Evolutionary history of an organism is known as:
(a) Ontogeny
(b) Ancestry
(c) Phylogeny
(d) Palaeontology
48. Recapitulation theory was proposed by
(a) Wallace
(b) Cuvier
(c) Weismann
(d) Haeckel
49. Haeckel's theory of recapitulation means that:
(a) Regeneration
(b) Ontogeny repeats phylogeny
(c) Progeny of an organism resembles its parents
(d) All organisms begin their life with a single cell
50. During embryonic period, animals repeat embryonic stages of their ancestors. This law is called
(a) Florkin's law
(b) Biogenetic law
(c) Anaximander's law
(d) Hardy-Weinberg's law

51. The biogenetic law is based on:
(a) fossils evidences
(b) genetic evidences
(c) biochemical evidences
(d) embryological evidences
52. In the developmental history of mammalian heart, it is observed that it passes through a two-chambered fish-like heart, three chambered frog-like heart and finally four-chambered stage. To which hypothesis can this above cited statement be approximated?
(a) Biogenetic law
(b) Hardy-Weinberg's law
(c) Lamarck's principle
(d) Mendelian principles
53. A good example of recapitulation theory is:
(a) canine teeth of dog
(b) tadpole larva of frog
(c) placenta of mammals
(d) embryonic membranes of reptiles
54. The most direct evidence of organic evolution is:
(a) fossils
(b) embryos
(c) morphology
(d) vestigial organs
55. Fossils are remnants of:
(a) dead organisms
(b) extinct organisms
(c) connecting links
(d) present organisms
56. Palaeontology is the science that deals with:
(a) extinct life
(b) developing embryo
(c) evolution of life
(d) pollen development
57. Fossils are studied for:
(a) tracing evolutionary history of organisms
(b) studying extinct organisms
(c) providing jobs to scientist
(d) both (a) and (b)
58. Founder of modern palaeontology is:
(a) Th.Dobzhansky
(b) Julian Huxley
(c) Georges Cuvier
(d) Ernst Haeckel
59. The fossils are preserved in:
(a) sedimentary rocks
(b) igneous rocks
(c) metamorphic rocks
(d) none of these
60. What conclusion is drawn from stratification of a fossil?
(a) Upper strata are recent and lower are older
(b) Reverse of (a)
(c) No stratification takes place
(d) None of the above

61. Fossil X is older than fossil Y because:
- (a) Fossil Y was found in deeper sedimentation
 - (b) Fossil X was found in deeper sedimentation
 - (c) Fossil Y has some vestigial organs functional in X
 - (d) Fossil Y has homologous and analogous organs of X
62. The fossil record:
- (a) is not complete
 - (b) documents the history of life
 - (c) provides examples of the evolution of major new groups of organisms
 - (d) all of the above
63. The material used in determining the age of a fossil is:
- (a) Iodine
 - (b) Sulphur
 - (c) Carbon
 - (d) Radioactive carbon
64. Which of the following is used for dating fossils?
- (a) H^5
 - (b) C^{14}
 - (c) Sr^{90}
 - (d) I^{125}
65. Half-life of ^{14}C is:
- (a) 5568 years
 - (b) 10,050 years
 - (c) 1000 years
 - (d) 50,000 years
66. Carbon dating is best suited for determining the age of fossils if their age in years is of the order of:
- (a) 10^3
 - (b) 10^4
 - (c) 10^5
 - (d) 10^6
67. Which of the following is the relatively most accurate method for dating of fossils?
- (a) Uranium — Lead method
 - (b) Radio — Carbon method
 - (c) Potassium — Argon method
 - (d) Electron — Spin resonance method